

PATENT

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Deborah Knutzon, et al.)

Group Art Unit:

Serial No.: To Be Determined)

Examiner:

Filed: Herewith)

PRELIMINARY AMENDMENTFor: **METHODS AND COMPOSITIONS
FOR SYNTHESIS OF LONG CHAIN
POLY-UNSATURATED FATTY ACIDS**)2001 Ferry Building
San Francisco, CA 94111

Attorney Docket: CGAB-210 USA

Assistant Commission for Patents
Washington, D.C. 20231

Sir:

Prior to examination of the above-referenced patent application, please
enter the following amendments and remarks.

In the Claims

Cancel claims 1-64.

65. (Amended) A method for obtaining altered long chain polyunsaturated fatty acid biosynthesis comprising the steps of:

growing [a plant having] microbial cells which contain one or more transgenes[, derived from a fungus or algae,] which encodes a transgene expression product [which desaturates a fatty acid molecule at a carbon selected from the group consisting of carbon 6 and carbon 12 from the carboxyl end of said fatty acid molecule wherein said one or more transgenes is operably associated with an expression control sequence,] under conditions whereby said one or more transgenes is expressed, whereby long chain polyunsaturated fatty acid biosynthesis in said cells is altered whereby said transgene comprises a nucleotide sequence which encodes a polypeptide wherein the sequence of the polypeptide comprises a sequence selected from the group consisting of residues 50-53, 39-43, 172-176, 204-213 and 390-402 of SEQ ID NO:2.

CGAB-210